

APPENDIX

Machine translation of Langwaldt as cited by the Examiner

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[0001] The invention relates to a dishwasher in accordance with the features of the preamble of Claim 1.

[0002] With dishwashers the respective load and discharge opening become usually sealed by a door, which is provided with a closure in its upper portion. An hooked part (cases), arranged at the closure, intervenes in a Schliesskloben arranged at the machine housing in the closed state of the winding machine.

[0003] Disadvantageous one is with the known dishwashers above all that in the case that the winding machine becomes not immediately opened after the use (e.g. absence lasting several hours of the user of the machine), which after drying in the machine remaining water vapor settles on the dish and leads to stains on the Spülgut, because on this settle corresponding drop-shaped limewashing hurry.

[0004] The invention is the basis the object to indicate a dishwasher with which also with absence lasting several hours of the user after the shutdown of the winding machine no stains on the Spülgut arise.

[0005] This object becomes according to invention by the features of the characterizing portion of the claim 1 dissolved. Other particularly advantageous embodiments of the invention reveal the Unteransprüche.

[0006] The invention is essentially based on the thought that the Schliesskloben is prolonged-displaceable arranged at the machine housing, so that after conclusion of the drying procedure the door can be opened by means of an electric motor to one by the width of a slit and the water vapor can escape outward. Over a corresponding control device coupled with the program work of the winding machine the shifting procedure can after the drying procedure introduced and e.g. after a predetermined time by retraction of the Schliessklobens into its initial position ended become.

[0007] With a favourable formation of the invention form Schliesskloben, electric motor and transmissions a replaceable assembly. It has possible in a simple manner to reequip as well as with disturbances of the single assemblies this by the exchange of the entire assembly rapid by a new assembly with already one on the other balanced assemblies replace older dishwashers.

[0008] Other details and advantages of the invention result from the subsequent on the basis from figs explained embodiments. Show:

[0009] Fig.1 a perspective view of a dishwasher according to invention;

[0010] Fig.2 a schematic section by the closing range of the dishwasher with closed door, represented in Fig.1;

- [0011] Fig.3 the Fig.2 corresponding closing range with driven out Kloben;
- [0012] Fig.4 the plan view on an assembly existing from Schliesskloben, electric motor and transmission and
- [0013] Fig.5 a plan view on the Schliesskloben of the assembly represented in Fig.4.
- [0014] In Fig. 1 is with 1 a dishwasher designated, which consists and discharged ones of the dish of a machine housing 2 with to an opening 3 front and the opening 3 locking door 4. At the upper end of the housing opening 3 an assembly is 5 6 arranged with a Schliesskloben.
- [0015] As follows from Fig.2, the Schliesskloben 6 intervenes with closed door in cases 7 of a closure 8 arranged in the door 4 and holds the door 4 too. An opening key is to open the door 4 designated with 9 in Fig.2.
- [0016] The Schliesskloben 6 displaceable within the assembly 5 arranged is according to invention. The door becomes 4 further of the closure 8 held with driven out Klobenstellung - as in Fig.3 shown -. The door 4 is however no more into the door seal pressed, so that in the interior 1 present water vapor from the winding machine if necessary can escape.
- [0017] The Fig.4 and 5 show the structure of the assembly 5. It essentially consists of an housing 10 (its front part for clarity reasons shown is not), which in the housing 10 displaceable stored Schliesskloben 6, an electric motor 11, which is 1 connected over two electrical connections 12, 13 with the program work of the winding machine not represented for clarity reasons and a transmission 14, which connects the motor 11 with the Schliesskloben 6. The unit existing from motor 11 and transmission 14 should preferably be closing designed, in order to exclude a shifting of the Klobens 6 with standstill of the motor 11. In the represented embodiment the made automatic interlock by use of a worm shaft 15, which is 16 fixed on the motor shaft.
- [0018] The torque of the motor shaft 16 becomes over the worm shaft 15 and 19 transmitted over two other 18 gears designated with 17 and on a pinion, which intervenes in the teeth of a rack 20 connected with the Kloben 6 (Fig.5). The rack 20 is 6 arranged thereby in a recess 21 of the Klobens.
- [0019] In Fig.5 5 two notice-flat are 22, 23 provided in the housing 10 of the assembly, which the end positions of the Schliessklobens 6 give. The notice-flat 22 becomes by the inner wall of the housing 10 in the region, in that the rear of the Klobens 6 this wall into end position a touched, formed. The notice-flat 23 becomes 24 formed by a separate metal plate arranged within the recess 21, against which those presses the rear 25 of the Klobens 6 directed wall 26 of the recess 21, if the Schliesskloben 6 is in its forward position.
- [0020] In the following with the sequence of functions of the dishwasher according to invention one deals:
- [0021] After the loaded one of the dishwasher 1 over the opening 3 the door 4 closed (Fig.2) becomes and over the selected rinse cycle the program work corresponding set. After conclusion of the rinsing and drying procedure the program work gives first the closure to 8 to open the door 4 free. If the door not within a

predetermined time, e.g. 5 minutes, opened, the generated program work a pulse, one turning the electric motor 11 on and thus a displacement of the Schliessklobens 6 becomes toward the closure 8 effected. This sliding movement made so long, until the wall pushes 26 of the Schliessklobens against the notice-flat 23 of the metal plate 24 and a corresponding, not represented contact switches switch the electric motor off 11 and switches the direction of rotation of the motor (Fig.3).

[0022] In this position the dishwasher 1 remains likewise a predeterminable time, which is in such a manner selected that the water vapor escaped from safe from the machine 1 is. Subsequent one the generated program work again a pulse, which starts the electric motor 11, so that itself the Schliesskloben 6 back into its initial position moved. After the rear 25 of the Klobens 6 has the notice-flat 22 achieved, a corresponding contact switch (not shown) switches the electric motor 11 and the direction of rotation of the motor 11 corresponding. The door 4 can become now the table-ware withdrawal, approximately by operation of the opening key 9, again opened.

[0023] Of course the invention is not managing on that described embodiment limited. Thus it proved for example as particularly favourable, if the electric drive of the Schliessklobens 6 in such a manner made that the door 4 opened light after expiration of the programme remains. This has easier opening and reasoning door 4 to sequence, since the door 4 not into the seal, becomes edge-laterally sealed with which the opening 3 (Fig.1), pressed will must. Only with beginnings of the washing process and/or. program star width unit the Schliesskloben 6 then into the end position drawn and thus the door 4 proper sealed become.

Reference symbol list

- 1 Dishwasher
- 2 Machine housing
- 3 Opening
- 4 Door
- 5 Assembly
- 6 Schliesskloben
- 7 Cases
- 8 Closure
- 9 Opening key
- 10 Housing
- 11 Electric motor, motor
- 12,13 electrical connections
- 14 Transmission
- 15 Worm shaft
- 16 Motor shaft
- 17,18 Gears
- 19 Pinion
- 20 Rack
- 21 Recess

22,23 Notice-flat
24 Metal plate
25 Rear of the Klobens
26 Wall